

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

LISTING OF CLAIMS:

1.-24. (CANCELED)

25. (CURRENTLY AMENDED) A magnetic head, comprising:
an underlying layer, the underlying layer being electrically insulating;
a photoresist layer positioned adjacent the underlying layer and having two opposing sides defining a channel, a bottom of the channel extending between the opposing sides being defined by the underlying layer; and
a coil structure formed of a conductive material situated in the channel;
wherein a profile of each of the sides of the photoresist layer that define the channel includes a first segment and a second segment that is contiguous with the first segment, the first segment defining a first angle relative to a plane of deposition of the photoresist layer, the second segment defining a second angle relative to the plane of deposition of the photoresist layer, the second angle being different than the first angle,
wherein the first segment of each side of the photoresist layer is positioned below the second segment located contiguously thereto,
wherein ~~heights of the first segments~~ a height of the first segment of each side of the photoresist layer measured perpendicular to the plane of deposition of the photoresist layer extends from the underlying layer to a point between 20% and 80% of a total channel height from a top of the channel.
26. (PREVIOUSLY PRESENTED) The magnetic head as recited in claim 25,
wherein the height of the first segment of each side of the photoresist layer is greater than a height of the second segment located contiguously thereto.

27. (CURRENTLY AMENDED) The magnetic head as recited in claim 25, wherein the first ~~segments~~ segment of each of the opposing sides of the photoresist layer taper together towards the underlying layer .
28. (PREVIOUSLY PRESENTED) The magnetic head as recited in claim 27, wherein the first segment defines an angle between 70 and 85 degrees relative to the plane of deposition of the photoresist layer.
29. (PREVIOUSLY PRESENTED) The magnetic head as recited in claim 25, wherein the second segment defines an angle that is substantially perpendicular to the plane of deposition of the photoresist layer.
30. (PREVIOUSLY PRESENTED) The magnetic head as recited in claim 25, wherein the second segment defines an angle between 80 and 90 degrees relative to the plane of deposition of the photoresist layer.
31. (PREVIOUSLY PRESENTED) The magnetic head as recited in claim 29, wherein the first segment defines an angle between 70 and 85 degrees relative to the plane of deposition of the photoresist layer.
32. (PREVIOUSLY PRESENTED) The magnetic head as recited in claim 25, wherein the channel is formed by reactive ion etching, wherein the reactive ion etching includes $H_2/N_2/CH_3F/C_2H_4$ reducing chemistry.
33. (ORIGINAL) The magnetic head as recited in claim 25, wherein the photoresist is hard-baked.
34. (ORIGINAL) The magnetic head as recited in claim 25, wherein the conductive material includes Cu.

35. (ORIGINAL) The magnetic head as recited in claim 25, wherein an aspect ratio of the channel and coil structure is at least 2.5.
36. (CURRENTLY AMENDED) A magnetic head, comprising:
an underlying layer, the underlying layer being electrically insulating;
a photoresist layer positioned adjacent the underlying layer and having two opposing sides defining a channel, a bottom of the channel extending between the opposing sides being defined by the underlying layer; and
a coil structure formed of a conductive material situated in the channel;
wherein a profile of each of the sides of the photoresist layer that define the channel includes a first segment and a second segment that is contiguous with the first segment, the first segment defining a first angle relative to a plane of deposition of the photoresist layer, the second segment defining a second angle relative to the plane of deposition of the photoresist layer, the second angle being different than the first angle,
wherein the first segment of each side of the photoresist layer is positioned below the second segment located contiguously thereto,
wherein ~~heights of the first segments~~ a height of the first segment of each side of the photoresist layer measured perpendicular to the plane of deposition of the photoresist layer extends from the underlying layer to a point between 20% and 80% of a total channel height from a top of the channel,
wherein the first segments segment of each of the opposing sides of the photoresist layer taper together towards the underlying layer,
wherein the second segment defines an angle between 80 and 90 degrees relative to the plane of deposition of the photoresist layer,
wherein the first segment defines an angle between 70 and 85 degrees relative to the plane of deposition of the photoresist layer.
37. (CURRENTLY AMENDED) A disk drive system, comprising:
a magnetic recording disk;
a magnetic head including:

an insulating layer,
a photoresist layer positioned adjacent the insulating layer, the photoresist layer having opposing sides defining at least one channel, and
a coil structure defined by a conductive material situated in the channel,
wherein each of the sides of the photoresist layer includes a first segment defining a first angle and a second segment defining a second angle, the first and second segments being contiguous;

wherein a height of the first segment measured perpendicular to the plane of deposition of the photoresist layer extends from the insulating layer to a point between 20% and 80% of a total channel height from a top of the channel;

wherein the photoresist layer does not overlay the coil structure.

an actuator for moving the magnetic head across the magnetic recording disk so the magnetic head may access different regions of the magnetic recording disk; and
a controller electrically coupled to the magnetic head.

38. (NEW) A magnetic head, comprising:

an insulating layer;

a photoresist layer positioned adjacent the insulating layer for defining at least one channel; and

a coil structure defined by a conductive material situated in the at least one channel, wherein the photoresist layer does not overlay the coil structure;

wherein a profile of the channel includes a first segment defining a first angle relative to a plane of deposition of the photoresist layer, and a second segment continuous with the first segment, the second segment defining a second angle relative to a plane of deposition of the photoresist layer, the second angle being different than the first angle.

39. (NEW) The magnetic head as recited in claim 38, wherein the height of the first segment of each side of the photoresist layer is greater than a height of the second segment located contiguously thereto.

40. (NEW) The magnetic head as recited in claim 38, wherein the first segment of each of the opposing sides of the photoresist layer taper together towards the underlying layer .
41. (NEW) The magnetic head as recited in claim 40, wherein the first segment defines an angle between 70 and 85 degrees relative to the plane of deposition of the photoresist layer.
42. (NEW) The magnetic head as recited in claim 38, wherein the second segment defines an angle that is substantially perpendicular to the plane of deposition of the photoresist layer.
43. (NEW) The magnetic head as recited in claim 38, wherein the second segment defines an angle between 80 and 90 degrees relative to the plane of deposition of the photoresist layer.
44. (NEW) The magnetic head as recited in claim 43, wherein the first segment defines an angle between 70 and 85 degrees relative to the plane of deposition of the photoresist layer.
45. (NEW) The magnetic head as recited in claim 38, wherein the channel is formed by reactive ion etching, wherein the reactive ion etching includes $\text{H}_2/\text{N}_2/\text{CH}_3\text{F}/\text{C}_2\text{H}_4$ reducing chemistry.
46. (NEW) The magnetic head as recited in claim 38, wherein the photoresist is hard-baked.
47. (NEW) The magnetic head as recited in claim 38, wherein the conductive material includes Cu.

48. (NEW) The magnetic head as recited in claim 38, wherein an aspect ratio of the channel and coil structure is at least 2.5.
49. (NEW) The magnetic head as recited in claim 25, wherein the layer of photoresist does not overlay the coil structure.
50. (NEW) The magnetic head as recited in claim 36, wherein the layer of photoresist does not overlay the coil structure.